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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Jen-Lin Chao

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EXAMINER

KARDOS, NEIL R

ART UNIT

PAPER NUMBER

3623

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/797,213	Applicant(s) CHAO ET AL.	
	Examiner Neil R. Kardos	Art Unit 3623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/27/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This is a non-final first Office action on the merits. Currently, claims 1-32 are pending.

Claim Objections

2. **Claims 20 and 32 are objected to for lack of antecedent basis. Appropriate correction is required.**

Claims 20 and 32 recite generating a bill for “the first order.” There is insufficient antecedent basis for this limitation in the claims because the claims they depend from recite “orders of a first type” rather than “first orders.”

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. **Claims 1-4, 9-12, 17, and 29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

Claims 1-4 and 9-12 recite systems comprising modules and engines. These elements do not necessarily constitute a physical structure (i.e. they could be software). Rather, they could simply be procedures to be followed in order to achieve a desired outcome (i.e. a collection of computer instructions). However, these procedures are not tangibly embodied on a computer-readable medium providing physical structure. Thus, it is not clear how the elements of the claims, which lack a physical structure, constitute a system.

Claims 17 and 29 recite “separating orders based on respective corresponding delivery demand, thus identifying orders of a first type, in which orders of the first type direct a supplier to deliver products before the end of a period.” One of ordinary skill in the art at the time the invention was made would not clearly understand what this step is doing. Separating orders by delivery demand could mean separating orders by the quantity demanded, or by the desired delivery date. However, the specification does not support this interpretation. It appears to the Examiner that orders are separated into two groups: the first group has a desired delivery date and the second group does not. However, the second group without a delivery date is not positively recited. Examiner interprets this claim limitation to mean that orders with a desired delivery date are identified.

Claim Rejections - 35 USC § 101

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6. Claims 1-4 and 9-12 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 1-4 and 9-12 recite a system comprising modules and engines. These elements do not necessarily constitute a physical structure (i.e. they could be software). Rather, they could simply be procedures that are followed in order to achieve a desired outcome (i.e. a collection of computer instructions). However, these procedures are not tangibly embodied on a computer-readable medium providing physical structure. None of these claims recite any physical

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structure necessary to constitute a system. Therefore, the claims do not fall within a statutory class of patentable subject matter.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1-3, 5-7, 9-11, 13-15, 17-19, 21-23, 25-27, and 29-31 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. patent number 6,711,449 to Miyahara et al (“Miyahara”).

Claims 1, 5, and 21: Miyahara discloses a system, method, and computer program product for capacity management, comprising:

- receiving at least a first order having a period delivery demand, in which the period delivery demand directs a supplier to deliver products corresponding to the order before the end of the period (see column 7: lines 42-60; column 8: lines 52-59);
- receiving a second order with a pull-in demand; and pushing out the first order, and directing capacity reserved for the first order to meet the second order (see column 10: line 52 through column 11: line 27).

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Claims 2, 6, and 22: Miyahara discloses allocating additional capacity for the first order (see column 11: lines 4-13).

Claims 3, 7, and 23: Miyahara discloses generating a new manufacturing planning schedule and delivery dates for the first order and second order (see column 11: lines 4-13; column 11: lines 45-50).

Claims 9, 13, and 25: Miyahara discloses a system, method, and computer program product for capacity management, comprising:

- receiving at least a first order having a period delivery demand, in which the period delivery demand directs a supplier to deliver products corresponding to the order before the end of the period (see column 7: lines 42-60; column 8: lines 52-59);
- pushing out the first order, and directing capacity reserved for the first order to meet another order if a production event occurs (see column 10: line 52 through column 11: line 27).

Claims 10, 14, and 26: Miyahara discloses allocating additional capacity for the first order (see column 11: lines 4-13).

Claims 11, 15, and 27: Miyahara discloses generating a new manufacturing planning schedule and delivery dates for the first order and second order (see column 11: lines 4-13; column 11: lines 45-50).

Claims 17 and 29: Miyahara discloses a method and computer program product for capacity management, comprising:

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- separating orders based on respective corresponding delivery demand, thus identifying orders of a first type, in which orders of the first type direct a supplier to deliver products before the end of a period (see column 7: lines 42-60; column 8: lines 52-59);
- selecting at least one of the orders of the first type to be pushed out if another order with a pull-in demand is received or a production event occurs (see column 10: line 52 through column 11: line 27).

Claims 18 and 30: Miyahara discloses allocating additional capacity for the pushed out order (see column 11: lines 4-13).

Claims 19 and 31: Miyahara discloses generating a new manufacturing planning schedule and delivery dates for the pushed out order (see column 11: lines 4-13; column 11: lines 45-50).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 4, 8, 12, 16, 20, 24, 28, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyahara in view of U.S. patent number 7,069,234 to Cornelius et al (“Cornelius”), and further in view of Official Notice.

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Claims 4, 8, 12, 16, 24, and 28: Miyahara does not explicitly disclose wherein the first order further has a billing condition directing the supplier to generate a bill for the first order as late as possible.

Cornelius teaches the benefits of a “pay as late as possible” policy (see column 173: lines 38-43). Examiner take Official Notice that it was well known in the accounting and contracting arts at the time the invention was made to gain the benefits of a “pay as late as possible” policy by including that policy as a billing condition on an order.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply well-known accounting and contracting principles to include the payment policy taught by Cornelius as a billing condition on an order. One of ordinary skill in the art would have been motivated to do so for the benefit of increased cash flows for the buyer (see Cornelius: column 173: lines 38-43).

Examiner further takes Official Notice that it was well-known in the business arts at the time the invention was made to give a higher priority to customers who make payments first. For example, customers who pay first are often given the first available spot in a queue (e.g. reservations).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply well-known business practices to the invention of Miyahara to give a higher priority to customers who pay first (by pushing out customers with a “pay as late as possible” billing condition on their order). One of ordinary skill in the art would have been motivated to do so for the benefit of increased cash flows for the seller.

Claims 20 and 32: Miyahara does not explicitly disclose separating the orders based on a respective corresponding billing condition directing the supplier to generate a bill for the first order as late as possible.

Cornelius teaches the benefits of a “pay as late as possible” policy (see column 173: lines 38-43). Examiner take Official Notice that it was well known in the accounting and contracting arts at the time the invention was made to gain the benefits of a “pay as late as possible” policy by including that policy as a billing condition on an order.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply well-known accounting and contracting principles to include the payment policy taught by Cornelius as a billing condition on an order. One of ordinary skill in the art would have been motivated to do so for the benefit of increased cash flows for the buyer (see Cornelius: column 173: lines 38-43).

Examiner further takes Official Notice that it was well-known in the business arts at the time the invention was made to give a higher priority to customers who make payments first. For example, customers who pay first are often given the first available spot in a queue (e.g. reservations).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply well-known business practices to the invention of Miyahara to give a higher priority to customers who pay first (by separating and pushing out customers with a “pay as late as possible” billing condition on their order). One of ordinary skill in the art would have been motivated to do so for the benefit of increased cash flows for the seller.

Additional Prior Art

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. patent number 5,040,123 to Barber et al, directed to an expert system scheduler.

U.S. patent number 6,415,195 to Gleditsch et al, directed to providing sufficient availability of manufacturing resources to meet unanticipated demand.

U.S. patent number 6,920,365 to Chao et al, directed to pull-in order planning and control.

U.S. patent number 7,164,959 to Huang et al, directed to classifying demand data.

U.S. patent number 7,209,887 to Yen et al, directed to an auto allocation swap system.

U.S. pre-grant publication number 2005/0144056 to Wang et al, directed to capacity reservation.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Neil R. Kardos whose telephone number is (571) 270-3443. The examiner can normally be reached on Monday through Friday from 9 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on (571) 272-6729. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Neil R. Kardos
Examiner
Art Unit 3623

NRK
3/28/08

/Beth Van Doren/
Primary Examiner, Art Unit 3623